

### Listing of Claims:

1. (Currently Amended) An impedance matcher for matching the impedance of [[a]] at least one high bit rate transmission channel of a copper-wired terminal installation (~~ITC~~) connected to an access network delivering narrowband (~~analog or ISDN~~) services and broadband (~~x-DSL~~) services, said installation comprising a high bit rate x-DSL modem (~~M~~) and a jack (~~P; P1; P2, P3~~), ~~which said impedance matcher is characterized in that it comprises~~ comprising:

an adjustment module (~~10, 30~~) installed in said jack (~~P; P1, P2, P3~~), ~~consisting of said adjustment module comprising~~ an RC circuit and being configured ~~adapted~~ to insert a terminating impedance into said jack (~~P; P1, P2, P3~~) when ~~[[it]]~~ said jack is not connected to said high bit rate x-DSL modem (~~M~~); and

a coupling module connected to the high bit rate x-DSL modem, said coupling module comprising a first resistor configured for connection in parallel with a capacitor of the adjustment module to reverse-bias a varicap diode of the adjustment module, (~~20, 40~~) ~~adapted to be combined~~ said coupling module being configured for combination with said adjustment module (~~10~~) when said high bit rate x-DSL modem (~~M~~) is connected to said jack (~~P; P1, P2, P3~~) to transform the impedance inserted into said jack, ~~to make it transparent to high bit rate transmission of broadband services~~[[.]]

2. (Currently Amended) ~~An~~ The impedance matcher according to claim 1, ~~characterized in that~~ wherein the RC circuit of the adjustment module (~~10, 30~~) comprises, in series, a second resistor (~~R~~), ~~[[a]]~~ the capacitor (~~C1, C2~~), and ~~[[a]]~~ the varicap diode (~~D1, D2~~).

3. (Currently Amended) ~~An~~ The impedance matcher according to claim 1, ~~characterized in that further comprising a distributed filter the adjustment module (10, 30) is connected in parallel with the adjustment module.~~ distributed filter (200)[[.]]

4. (Currently Amended) ~~An~~ The impedance matcher according to claim 3, ~~characterized in that wherein the adjustment module (40) comprises an even number of varicap diodes (D1, D2)~~[[.]]

5. (Currently Amended) ~~An~~ The impedance matcher according to claim 4, ~~characterized in that wherein the varicap diodes (D1, D2) are disposed in a head-to-tail manner.~~

6. (Canceled)

7. (Currently Amended) ~~An~~ The impedance matcher according to claim 1, ~~characterized in that wherein the adjustment module (30) includes a varicap diode (D1) and the coupling module (40) includes a rectifier bridge consisting of comprising rectifier diodes (D2, D3, D4, D5) and a resistor bridge (R3, R4).~~

8. (Currently Amended) ~~An~~ The impedance matcher according to claim 6 1, ~~characterized in that wherein the first resistor (R1, R2, R3, R4) has a value from 2 MΩ to 5 MΩ.~~

9. (Canceled)

10. (Currently Amended) ~~An~~ The impedance matcher according to claim 1, ~~characterized in that~~ wherein the high bit rate x-DSL modem (~~M~~) is a VDSL modem.

11. (Currently Amended) A copper-plated terminal installation (~~ITC~~) connected to an access network carrying narrowband services and broadband services comprising ~~[[a]]~~ the jack (~~P; P1, P2, P3~~) and ~~[[a]]~~ the high bit rate x-DSL modem (~~M~~), ~~characterized in that it~~ wherein the copper-plated terminal installation includes impedance matchers according to claim 1.

12. (Currently Amended) An installation according to claim 11, ~~characterized in that~~ wherein the impedance matchers each comprise two modules (~~10, 20; 30, 40~~) ~~adapted to be combined~~ configured for combination with each other when ~~[[a]]~~ the high bit rate x-DSL modem (~~M~~) is connected to the jack (~~P; P1, P2, P3~~), ~~the~~ a first module (~~10; 30~~) being installed in said jack (~~P; P1, P2, P3~~) ~~at the point of~~ at an access point to the network and the ~~other~~ second module (~~20; 40~~) being disposed in ~~the~~ a plug for connecting the high bit rate x-DSL modem (~~M~~).

13. (Currently Amended) A method of matching ~~the~~ impedance of a high bit rate transmission channel of a copper-wired terminal installation (~~ITC~~) connected to an access network delivering narrowband services and broadband services, said installation comprising a high bit rate modem (~~M~~) and a jack (~~P; P1; P2, P3~~), ~~which method is characterized in that it comprises the following~~ the method comprising the steps of:

~~an adjustment step comprising~~ inserting, via an adjustment module, a terminating impedance into said jack (~~P; P1, P2, P3~~) when ~~it~~ said jack is not connected to said high bit rate modem (~~M~~) to adjust impedance of the jack; and

~~when said high bit rate modem is connected to said jack, a coupling step comprising transforming, via a coupling module connected to the high bit rate modem, the terminating impedance inserted into said jack when said high bit rate modem is connected to said jack; to make it transparent to high bit rate transmission of broadband services~~

wherein the coupling modem comprises a first resistor configured for connection in parallel with a capacitor of the adjustment module to reverse-bias a varicap diode of the adjustment module, said coupling module being configured for combination with said adjustment module when said high bit rate modem is connected to said jack.

14. (Currently Amended) An impedance matcher for matching the impedance of a high bit rate transmission channel of a copper-wired terminal installation (ITC) connected to an access network delivering narrowband services and broadband services, said installation comprising a high bit rate modem, (M) and a jack, (P; P1; P2, P3), ~~which impedance matcher is characterized in that it comprises~~ the impedance matcher comprising:

an adjustment module ~~(10, 30)~~ installed in said jack ~~(P; P1, P2, P3)~~, and ~~adapted~~ said adjustment module being configured to insert a terminating impedance into said jack ~~(P; P1, P2, P3)~~ when ~~[[it]]~~ said jack is not connected to said high bit rate modem ~~(M)~~; and

a coupling module connected to the high bit rate modem, (20, 40) ~~adapted~~ said coupling modem comprising a resistor configured for connection in parallel with a capacitor of the adjustment module to reverse-bias a varicap diode of the

adjustment module, said coupling module being configured for combination to be  
~~combined~~ with said adjustment module (10) when said high bit rate modem (M) is  
connected to said jack (P; P1, P2, P3) to transform the impedance inserted into  
said jack, ~~to make it transparent to high bit rate transmission of broadband~~  
~~services[[.]]~~

15. (Currently Amended) A copper-plated terminal installation (HTE) connected to an  
access network carrying narrowband services and broadband services comprising a jack (P; P1,  
P2, P3) and a high bit rate modem (M), ~~characterized in that it~~ wherein the copper-plated  
terminal installation includes impedance matchers comprising:

an adjustment module (10, 30) installed in said jack, (P; P1, P2, P3), ~~and~~  
~~adapted~~ said adjustment module being configured to insert a terminating  
impedance into said jack (P; P1, P2, P3) when ~~[[it]]~~ said jack is not connected to  
said high bit rate modem (M); and

a coupling module connected to the high bit rate modem, (20, 40) ~~adapted~~  
said coupling module comprising a resistor configured for connection in parallel  
with a capacitor of the adjustment module to reverse-bias a varicap diode of the  
adjustment module, said coupling module being configured for combination to be  
~~combined~~ with said adjustment module (10) when said high bit rate modem (M) is  
connected to said jack (P; P1, P2, P3) to transform the impedance inserted into  
said jack, ~~to make it transparent to high bit rate transmission of broadband~~  
~~services[[.]]~~